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<div>7590 02/19/2010</div> <div>KELLEY DRYE & WARREN LLP</div> <div>400 Atlantic Street 13th Floor</div> <div>Stamford, CT 06901</div>				
EXAMINER				
LEE, ANDREW CHUNG CHEUNG				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/527,978

Applicant(s)

STEPHENS ET AL.

Examiner

Andrew C. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 26-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 26-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI.08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Interval Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Claims 1, 26 – 43 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claims 1 and 36, the metes and bounds for the claim subject matters "hierarchical order", "higher layer", "lowest layer" etc., are not disclosed and described in the specification during the time the application was originally filed.

Regarding claim 1, the amended claim subject matter "wherein nodes of said plurality of the nodes are organized in a hierarchical order, such that a number of highest layer components of said plurality of the access points comprised in said plurality of the nodes is smaller than a number of lowest layer components of said plurality of the access points comprised in said plurality of the nodes in order to reduce a total number of components needed to provide said plurality of the access points of a communication network of said system" is not disclosed and

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indicated explicitly in the specification at the time the application was initially filed.

Clarification and appropriate action are required.

Regarding claim 36, the amended claim subject matter “wherein nodes of said plurality of the nodes are organized in a hierarchical order, such that a number of highest layer components of said plurality of the access points comprised in said plurality of the nodes is smaller than a number of lowest layer components of said plurality of the access points comprised in said plurality of the nodes in order to reduce a total number of components needed to provide said plurality of the access points of the communication network of said system” is not disclosed and indicated explicitly in the specification at the time the application was initially filed. Clarification and appropriate action are required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 28, 39, 31, 32, 36, are rejected under 35 U.S.C. 102(b) as being anticipated by Okajima et al. (US 20010018336 A1).

Regarding claim 1, Okajima et al. disclose a system (*Fig. 1, Fig. 2, Fig. 3*), comprising: a plurality of access points distributed through a plurality of nodes of said system (*Fig. 1, Fig. 2, Abstract*), wherein components of each access point of said plurality of the access points is divided into two or more groups located in

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corresponding two or more nodes of said plurality of the nodes, said two or more nodes being remotely located relative to each other, such that each of said two or more nodes is configured to establish a remote communication link with one or more of said two or more nodes (*Fig. 1, Fig. 2, Abstract, paras. [0006] - [0009]*), wherein nodes of said plurality of the nodes are organized in a hierarchical order (*Fig. 1, Fig. 2*), such that a number of highest layer components of said plurality of the access points comprised in said plurality of the nodes is smaller than a number of lowest layer components of said plurality of the access points comprised in said plurality of the nodes in order to reduce a total number of components needed to provide said plurality of the access points of a communication network of said system (*Fig. 1, Fig. 2, Abstract, paras. [0006], [0078] – [0080]*).

Regarding claims 28, 39, Okajima et al. disclose the system and method claimed wherein each of said two or more groups located in said corresponding two or more nodes of said plurality of the nodes comprises a remote link driver configured to provide said remote communication link by extending a bus or using a protocol stack tunnel between corresponding components of said each of said two or more groups (*paras. [0088], [0089]*).

Regarding claim 31, Okajima et al. disclose the system claimed further comprising one or more system controllers, wherein each system controller of said one or more system controllers is configured to control one or more access points of said plurality of the access points distributed through said plurality of the nodes (*Fig. 1, Fig.2, paras. [0006], [0078]*).

Regarding claim 32, Okajima et al. disclose the system claimed wherein at least one of said one or more system controllers is logically centralized and implemented as a physical switch (*"the switch"*; Fig. 2, paras. [0006], [0078]).

Regarding claim 36, Okajima et al. disclose a method (Fig. 1, Fig. 2, Fig. 3, Abstract), comprising: receiving or transmitting a communication signal by any access point of a plurality of the access points of a communication network of a system for further processing, said plurality of the access points being distributed through a plurality of nodes of said system (Fig. 1, Fig. 2, Abstract, paras. [0006] - [0007], [0078]), wherein components of each of said plurality of the access points are divided into two or more groups located in corresponding two or more nodes of said plurality of the nodes, said two or more nodes being remotely located relative to each other, such that each of said two or more nodes is configured to establish a remote communication link with one or more of said two or more nodes (Fig. 1, Fig. 2, Abstract, paras. [0006] - [0009]), and wherein nodes of said plurality of the nodes are organized in a hierarchical order, such that a number of highest layer components of said plurality of the access points comprised in said plurality of the nodes is smaller than a number of lowest layer components of said plurality of the access points comprised in said plurality of the nodes in order to reduce a total number of components needed to provide said plurality of the access points of the communication network of said system (Fig. 1, Fig. 2, Abstract, paras. [0006], [0078] - [0080]).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 26, 27, 37, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okajima et al. (US 20010018336 A1) in view of Atkinson et al. (US 20020012329 A1).

Regarding claims 26, 37, Okajima et al. disclose the system, method claimed wherein each access point of said plurality of the access points comprises corresponding two or more nodes of said plurality of the nodes (*Fig. 1. Fig. 2*), said corresponding two or more nodes are: an access dot, and an access dot controller (*Fig. 3, para. [0080]*)

Okajima et al. do not disclose explicitly an access dot, comprising a radio frequency layer component; and an access dot controller, comprising an access point software layer component. Atkinson et al. in the same field of endeavor teach an access dot, comprising a radio frequency layer component (*Fig. 1, para. [0013]; element 133, RF module and baseband, Fig. 4, para. [0052]; Fig. 6, paras. [0071], [0072]*); and an access dot controller, comprising an access point software layer component (*Fig. 1, para. [0016]; element 132, Fig. 4, para. [0054]; Fig. 6, paras. [0071], [0072]*). At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Okajima et al. to

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include the features of an access dot, comprising a radio frequency layer component; and an access dot controller, comprising an access point software layer component as taught by Atkinson et al. One of ordinary skill in the art would be motivated to do so for providing wireless communications between devices and more particularly, to Java.TM. or Java-like technology based communications between baseband technology enabled devices (*as suggested by Atkinson et al., see para. [0002]*).

Regarding claims 27, 38, Okajima et al. disclose the system and method claimed wherein said remote communication link is a wireless communication link (*"wireless channel"; Fig. 2, Fig. 3, para. [0082]*),

Okajima et al. do not disclose explicitly a short-range wireless communication link, a BLUETOOTH link, or a wired link. Atkinson et al. in the same field of endeavor teach a short-range wireless communication link, a BLUETOOTH link (*"short-range", Bluetooth"; paras. [0005] – [0007]*), or a wired link (*wired; para. [0053]*). At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Okajima et al. to include the features of a short-range wireless communication link, a BLUETOOTH link, or a wired link as taught by Atkinson et al. One of ordinary skill in the art would be motivated to do so for providing wireless communications between devices and more particularly, to Java.TM. or Java-like technology based communications between baseband technology enabled devices (*as suggested by Atkinson et al., see para. [0002]*).

7. Claims 29, 40, 30, 41, 34, 42, 35, 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okajima et al. (US 20010018336 A1) and Atkinson et al. (US 20020012329 A1) as applied to claims 1, 36 above, and further in view of Bahl et al. (US 7248570 B2).

Regarding claims 29, 40, 30, 41, 34, 42, 35, 43, Okajima et al. disclose the system and method claimed wherein each access point of said plurality of the access points comprises corresponding two or more nodes of said plurality of the nodes (*Fig. 1. Fig. 2*), said corresponding two or more nodes are: an access dot, and an access dot controller (*Fig. 3, para. [0080]*).

Okajima et al. do not disclose explicitly an access dot, comprising a radio frequency layer component; and an access dot controller, comprising an access point software layer component, wherein a physical layer component layer component is comprised in said access dot layer or in said access dot controller.

Atkinson et al. in the same field of endeavor teach an access dot, comprising a radio frequency layer component (*Fig. 1, para. [0013]; element 133, RF module and baseband, Fig. 4, para. [0052]; Fig. 6, paras. [0071], [0072]*); and an access dot controller, comprising an access point software layer component (*Fig. 1, para. [0016]; element 132, Fig. 4, para. [0054];; Fig. 6, paras. [0071], [0072]*), wherein a physical layer component layer component is comprised in said access dot layer or in said access dot controller *element 133, RF module and baseband, Fig. 4, para. [0052]; Fig. 6, paras. [0071], [0072]*), wherein an access point software layer component is comprised in said access dot layer or in said access dot controller (*element 132, Fig. 4, para. [0054]; Fig. 6, paras. [0071],*

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[0072]). At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Okajima et al. to include the features of an access dot, comprising a radio frequency layer component; and an access dot controller, comprising an access point software layer component, wherein a physical layer component layer component is comprised in said access dot layer or in said access dot controller, wherein an access point software layer component is comprised in said access dot layer or in said access dot controller as taught by Atkinson et al. One of ordinary skill in the art would be motivated to do so for providing wireless communications between devices and more particularly, to Java.TM. or Java-like technology based communications between baseband technology enabled devices (*as suggested by Atkinson et al., see para. [0002]*).

The combined system of Okajima et al. and Atkinson et al. does not disclose explicitly system controller comprising access point software layer component.

Bahl et al. in the same field of endeavor teach system controller comprising access point software layer component ("*controller*"; *Fig. 2, col. 6, lines 52 – 64*). At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Okajima et al. and Atkinson et al. to include the features of system controller comprising access point software layer component as taught by Bahl et al. One of ordinary skill in the art would be motivated to do so for providing bandwidth usage of a communication channel by wireless nodes in different types of networks that have overlapping transmission ranges (*as suggested by Bahl et al., see col. 1, lines 10 – 15*).

8. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okajima et al. (US 20010018336 A1) in view of Szentesi et al. (US 7366108 B2)

Regarding claim 33, Okajima et al. disclose the system claimed wherein at least one of said one or more system controllers is logically centralized (*Fig. 1, para. [0006], [0078]*) except implemented using a physically distributed hosting function incorporated into one or more access points of said plurality of the access points distributed through said plurality of the nodes.

Szentesi et al. in the same field of endeavor teach implemented using a physically distributed hosting function incorporated into one or more access points of said plurality of the access points distributed through said plurality of the nodes (*"radio network controllers" interpreted as system controller; Fig. 1, col. 5, lines 19 – 47*). At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Okajima et al. and Atkinson et al. to include the features of implemented using a physically distributed hosting function incorporated into one or more access points of said plurality of the access points distributed through said plurality of the nodes as taught by Szentesi et al. One of ordinary skill in the art would be motivated to do so for providing method for optimization of the configuration of a hierarchical network comprising a plurality of hierarchy levels each comprising nodes each of which receives aggregated traffic from a cluster of nodes of the hierarchy level below (*as suggested by Szentesi et al., see col. 2, lines 18 – 22*).

Response to Arguments

9. Applicant's arguments filed on 10/15/2009 with respect to claims 1, 26 – 43 have been fully considered but they are not persuasive.

- Claims 1 and 36 are rejected under 35 U.S.C. 112, first paragraph.

Regarding Claims 1, and 36, applicant argues "The above embodiment is a key important novel feature of distributed access points recite in claims 1 and 36 of the present patent application which seems is not understood by the Examiner. The whole specification is about this feature, e.g., see Figures 2-8 and corresponding description in the specification. The benefit of using distributed access points is summarized in Paragraph [0020] of the present US Patent Application Publication No 2006/0140161, stating: "The use of distributed access points allows a minimum or reduced amount of hardware to be deployed in the locations where users desire access, while processing power (and, thus, complexity) is concentrated in an controller node that can be scaled accordingly. This configuration can be especially useful when the system is scaled to include a large number of access points." In other words, if "a number of highest layer components" is equal to "a number of lowest layer components", then the invention recited in claim 1 does not make sense because there is no reduction in the amount of hardware.

In response to the applicant's argument, Examiner respectfully disagrees. The above remark provided by the applicant has no explicit correlation with the specification. As stated before, with respect to claims 1 and 36, the metes and bounds for the claim subject matters " hierarchical order", "higher layer", "lowest

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layer" etc., are not disclosed and described explicitly in the specification during the time the application was originally filed.

- Claims 1, 28, 38, 31, 32, 36, are rejected under 35 U.S.C. 102(b).

Applicant argues "In regard to claims 1 (and another independent claims 36), the subject matter recited in claim 1 of the present patent application is not disclosed by Okajima et al. Okajima et al. do not discuss, talk or even hint about "a plurality of access points distributed through a plurality of nodes of said system, wherein components of each access point of said plurality of the access points is divided into two or more groups located in corresponding two or more nodes of said plurality of the nodes, said two or more nodes being remotely located relative to each other, such that each of said two or more nodes is configured to establish a remote communication link with one or more of said two or more nodes," as recited in claim 1 of the present patent application. Applicant then used three examples relating to Figure 2 to disclose and demonstrate the features of his/her present application of minimizing or reducing amount of hardware (see applicant's remark, page 12).

In response to the applicant's remark/argument, Examiner respectfully disagrees. Applicant is reminded that, although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Genuns*, 988 F. 2d 1181, 26 USPQ2q 1057 (Fed. Cir. 1993).

Examiner contends reference Okajima teaches "a plurality of access points distributed through a plurality of nodes of said system, wherein components of each access point of said plurality of the access points is divided into two or more

groups located in corresponding two or more nodes of said plurality of the nodes, said two or more nodes being remotely located relative to each other, such that each of said two or more nodes is configured to establish a remote communication link with one or more of said two or more nodes.

Examiner interpreted "a plurality of access points distributed through a plurality of nodes of said system" as elements 41, 42, 43, base stations, elements (*Fig. 1, Fig. 2, Abstract*), wherein components of each access point of said plurality of the access points is divided into two or more groups located in corresponding two or more nodes of said plurality of the nodes, said two or more nodes being remotely located relative to each other, such that each of said two or more nodes is configured to establish a remote communication link with one or more of said two or more nodes ("each access point of said plurality of the access points is divided into two or more groups located in corresponding two or more nodes of said plurality of the nodes" is interpreted as the service area of base station and its mobile stations; "such that each of said two or more nodes is configured to establish a remote communication link with one or more of said two or more nodes" is interpreted as ad hoc mobile station, *Fig. 1, Fig. 2, Abstract, paras. [0006] - [0009]*), wherein nodes of said plurality of the nodes are organized in a hierarchical order (*Fig. 1, Fig. 2*), such that a number of highest layer components of said plurality of the access points comprised in said plurality of the nodes is smaller than a number of lowest layer components of said plurality of the access points comprised in said plurality of the nodes in order to reduce a total number of components needed to provide said plurality of the access points of a

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communication network of said system ("radio network controller in interpreted as highest layer, while mobile stations is interpreted as lower layer, higher layer has smaller number of components to support lower layer mobile stations..... Fig. 1, Fig. 2, Abstract, paras. [0006], [0078] – [0080]).

- Claims 26, 27, 37 rejection under 35 U.S.C. 103(a) citing references Okajima et al. and Atkinson et al.; Claims 29, 39, 30, 40, 34, 41, 35, 42 rejection under 35 U.S.C. 103(a) citing references Okajima et al., Atkinson et al., and Bahl et al. ; Claim 33 rejecting under 35 U.S.C. 103(a) citing references Okajima et al. and Szentesi et al.

Applicant the further argues "The novelty and non-obviousness of rejected dependent claims 26, 27, 29, 30, 33-35, 37 39, 40-43 under 35 U.S.C. 103(a) is provided by their dependence on the novel and non- obvious independent claims 1 and 36, as argued herein.

In response to the applicant's remark, Examiner respectfully disagrees.

Since reference Okajima et al. teach all the limitations in Claims 1 and 36, and the claims 26, 27, 29, 30, 33-35, 37 39, 40-43 are dependent upon independent claims 1 and 36, respectively. The combined system of references Okajima et al., Atkinson et al., and Bahl et al. and Szentesi et al. teaches the limitations in claims 26, 27, 29, 30, 33-35, 37 39, 40-43. The claims have been reconsidered and are not allowable.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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- a) Bahl et al. (US 7248570 B2).
- b) Okanoue (6134587).
- c) Vikberg et al. (US 6925074 B1).

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571)272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C Lee/
Examiner, Art Unit 2476 <2Q10::2_13_10>

/Ayaz R. Sheikh/
Supervisory Patent Examiner, Art Unit 2476